

**DIRECT TESTIMONY OF
ROSE M. JACKSON
ON BEHALF OF
SOUTH CAROLINA ELECTRIC & GAS COMPANY
DOCKET NO. 2018-5-G**

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.**

2 A. My name is Rose M. Jackson, and my business address is 1300 12th Street,
3 Suite F, Cayce, South Carolina. I am employed by SCANA Services, Inc.
4 ("SCANA Services") as General Manager- Supply & Asset Management.

5
6 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND BUSINESS**
7 **BACKGROUND.**

8 A. I graduated from the University of South Carolina in 1988 with a Bachelor
9 of Science degree in Accounting. Following graduation, I worked for approximately
10 three (3) years as an accountant for a national security services firm. In 1992, I
11 began my employment with SCANA Corporation ("SCANA") as an accountant
12 working directly for SCANA Energy Marketing, Inc. Over the years, I have held
13 varying positions of increasing responsibility including Energy Services
14 Coordinator, where I was responsible for scheduling gas for the Atlanta Gas Light
15 System; project manager for the implementation of an automated gas management
16 system; and Manager of Operations. In 1998, I became responsible for gas
17 procurement, interstate pipeline and local distribution company scheduling and
18 preparation of gas accounting information. In May 2002, I became Manager of

1 Operations and Gas Accounting with SCANA Services where I was responsible for
2 gas scheduling on interstate pipelines and gas accounting for all SCANA
3 subsidiaries. In November 2003, I became Fuels Planning Manager where I assisted
4 all SCANA subsidiaries with strategic planning and special projects associated with
5 natural gas. I held this position until promoted to my current position in December
6 2005.

7
8 **Q. WHAT ARE YOUR DUTIES AS GENERAL MANAGER – SUPPLY & ASSET**
9 **MANAGEMENT?**

10 A. In regard to South Carolina Electric & Gas Company (“SCE&G” or the
11 “Company”) concerning this proceeding, I am responsible for gas supply and asset
12 management functions. Specifically, my responsibilities include the oversight of
13 planning, procurement of supply and capacity, nominations and scheduling, gas cost
14 accounting, state and federal regulatory issues concerning supply and capacity, and
15 asset and risk management.

16
17 **Q. PLEASE DESCRIBE THE PURPOSE OF YOUR TESTIMONY.**

18 A. The purpose of my testimony in this docket is two-fold. First, I discuss
19 SCE&G’s portfolio of gas supply, addressing the various gas supply and
20 transportation options available to the Company. Second, I discuss the state of the
21 natural gas market during the period of August 1, 2017, to July 31, 2018 (“Review
22 Period”).

I. GAS SUPPLY

Q. PLEASE EXPLAIN THE GAS SUPPLY OPTIONS CURRENTLY AVAILABLE TO SCE&G.

A. There are three gas supply options that are available to SCE&G: (1) wellhead gas supply, (2) underground storage, and (3) liquefied natural gas ("LNG"). SCE&G's gas asset portfolio includes each of these supply options, and the Company has combined these supply options with interstate transportation to meet its firm demand under varying weather conditions at reasonable cost.

Q. PLEASE DESCRIBE THE AVAILABLE INTERSTATE PIPELINE TRANSPORTATION OPTIONS.

A. SCE&G purchases interstate pipeline transportation capacity on both a firm and interruptible basis from the three (3) interstate pipelines that provide service to SCE&G: Southern Natural Gas Company ("Southern"), Transcontinental Gas Pipe Line Corporation ("Transco"), and Dominion Energy Carolina Gas Transmission ("DECGT").

Interstate Firm Transportation ("FT") service permits SCE&G access to interstate pipeline transportation capacity on a priority basis. Interruptible Transportation ("IT") service is only available when FT customers, such as SCE&G, are not using their FT capacity. IT service is curtailed when FT customers use their capacity. In sum, FT and IT services use the same physical pipeline capacity, with FT service having priority. SCE&G contracts for FT service from the three

1 interstate pipelines serving South Carolina to ensure delivery of natural gas during
2 colder periods when the full transportation capacity of these pipelines is used and
3 when the demand for natural gas service is typically greatest. SCE&G currently
4 holds 161,144 dekatherms (“Dt”) of firm capacity on Southern and 70,458 Dt of
5 firm capacity on Transco. In addition, as of the beginning of the winter heating
6 season on November 1, 2018, SCE&G will have 372,929 Dt of firm capacity with
7 DECGT in order to deliver gas from Transco and Southern and from SCE&G’s in-
8 state LNG facilities to SCE&G’s system. Exhibit No. __ (RMJ-1) provides a
9 summary of the firm transportation contracts by pipeline supplier.

10
11 **Q. HOW DOES SCE&G OPTIMIZE ITS FIRM TRANSPORTATION**
12 **CAPACITY?**

13 A. SCE&G optimizes its firm transportation capacity through “segmentation”
14 which allows SCE&G to deliver up to twice as much supply on a portion of its firm
15 capacity while paying only one demand charge. Interstate pipelines allow
16 segmentation as long as the delivery point meter has sufficient capacity and gas supply
17 does not cross the same delivery point.

18
19 **Q. HAVE THERE BEEN ANY CHANGES AS TO HOW SCE&G OPTIMIZES**
20 **ITS FIRM TRANSPORTATION CAPACITY?**

21 A. No. As a result of the SCE&G Electric Department’s increased need for gas
22 capacity, the 2015 Memorandum of Understanding approved by the Public Service

Commission of South Carolina (“Commission”) in Docket No. 2015-5-G eliminated sharing of 27,000 Dt per day of interstate transportation base capacity between SCE&G’s Electric and Gas Departments on October 31, 2016. However, the 2015 MOU maintains the ability of the departments to share gas transportation capacity on an interruptible basis as conditions warrant. The MOU also allows the departments to allocate transportation capacity; therefore, the Gas Department continues to have access to 27,000 Dt in Zone 1 of the DECGT system.

Q. WHAT INTERSTATE STORAGE ASSETS ARE AVAILABLE TO THE COMPANY TO AID IN DELIVERING RELIABLE AND SECURE GAS SERVICE TO SCE&G CUSTOMERS?

A. The Company currently has 4,908,848 Dt of storage capacity on Southern’s system, with maximum daily withdrawal capability from this storage equaling 99,121 Dt per day at peak storage inventory. On Transco, SCE&G subscribes to 593,735 Dt of storage capacity, with a maximum withdrawal quantity of 19,789 Dt per day at peak storage inventory. Exhibit No. ____ (RMJ-2) reflects total storage and withdrawal capacity by pipeline supplier in a table format.

Q. PLEASE DESCRIBE THE LNG FACILITIES AND THEIR CAPACITIES.

A. SCE&G owns and operates two LNG facilities: one at Bushy Park near Charleston which can liquefy and store up to 980 million cubic feet (“Mmcf”) of LNG, and the other at Salley in Orangeburg County, which can store up to 900

1 Mmcf of trucked-in LNG. LNG must be transported to Salley via truck because
2 Salley has no liquefaction facilities.
3

4 **Q. AT WHAT VAPORIZATION RATE CAN SCE&G USE THESE**
5 **FACILITIES?**

6 A. The combined storage capability of these facilities allows our system
7 throughput planning to assume a maximum daily withdrawal quantity of 105
8 Mmcf/day. For example, assuming that storage volumes are at maximum capacity,
9 Bushy Park's inventory would be exhausted in approximately 16 days if operated at a
10 withdrawal rate of 60 Mmcf/day, and Salley's inventory would be exhausted in
11 approximately 20 days if operated at a withdrawal rate of 45 Mmcf/day.
12

13 **Q. WHAT BENEFIT DO THESE LNG ASSETS PROVIDE THE COMPANY?**

14 A. SCE&G relies primarily upon its LNG assets to fulfill the peaking needs of
15 its system and customers. Additionally, the on-system LNG service significantly
16 adds to the reliability and security of gas supply during unfavorable operating
17 conditions that may occur from time to time. For example, SCE&G's supply of gas
18 could be unexpectedly interrupted because abnormally cold weather creates a spike
19 in demand which in turn causes equipment malfunctions, well freeze-ups, and other
20 operational anomalies thereby limiting the supply of gas into South Carolina. In
21 these instances, SCE&G could employ the use of its on-system LNG facilities for a

1 limited time to offset or reduce any adverse effects caused by an upstream
2 interruption.

3 Attached hereto as Exhibit No. ____ (RMJ-3) is a comparison of SCE&G's
4 firm sales service to its capacity to deliver gas to serve firm demand. This exhibit
5 indicates that the Company will have firm assets sufficient to provide a 4.11%
6 system-wide operating reserve (excluding segmentation) during the upcoming
7 winter heating season. This operating reserve is conditioned on the availability of
8 the LNG facilities.

9
10 **Q. DO YOU ANTICIPATE ADDITIONAL INTERSTATE CAPACITY NEEDS**
11 **IN THE NEAR FUTURE?**

12 A. Yes. SCE&G will require additional interstate pipeline capacity in order to
13 meet future design day forecasts as a result of (1) demand growth on its system for
14 natural gas and (2) the inability to rely on segmentation between certain
15 geographical regions, or area points, to the degree it has in the past.

16 The three interstate natural gas pipelines that serve SCE&G have indicated
17 that, based on current contracts, they are fully subscribed. Typically, interstate
18 pipelines are designed with little to no unsubscribed capacity therefore requiring
19 advance notice to build facilities for additional natural gas throughput. As such,
20 SCE&G continues to evaluate new interstate projects available in the marketplace
21 and to seek opportunities to participate in larger interstate pipeline projects which

1 may provide a benefit due to the economies of scale associated with such future
2 projects.

3
4 **Q. ARE THE COSTS ASSOCIATED WITH INTERSTATE PIPELINE ASSETS**
5 **ANTICIPATED TO CHANGE IN THE NEAR FUTURE?**

6 A. Yes. Before Southern filed its pipeline rate case at the Federal Energy
7 Regulatory Commission ("FERC"), SCE&G and the other parties reached a pre-
8 filed rate case settlement with Southern which, among other things, included a
9 decrease associated with the Federal Tax Cuts & Jobs Act which provided for a
10 decrease in rates in two phases. The first phase, which became effective September
11 1, 2018, resulted in a 1% reduction in tariff rates, or a decrease of \$0.00094 per
12 therm for SCE&G's firm customers. The second phase, which will be effective
13 September 1, 2019, will result in an additional 7% reduction in tariff rates, or an
14 estimated decrease of \$0.00651 per therm for SCE&G's firm customers. The
15 cumulative estimated impact to SCE&G's firm customers is an estimated decrease
16 of \$0.00745 per therm. FERC approved the settlement in May 2018.

17
18 **Q. WHY IS SCE&G UNABLE TO CONTINUE TO RELY ON**
19 **SEGMENTATION TO THE DEGREE IT HAS IN THE PAST?**

20 A. SCE&G will no longer have the flexibility to rely on segmentation to meet
21 design day needs between area points to the degree it has in the past due to more
22 businesses subscribing to the DECGT pipeline to serve increased firm demand on

1 the DECGT system. Historically, SCE&G has reviewed its firm capacity needs on
2 a system-wide basis and relied on segmentation to meet design day needs between
3 area points. However, as its ability to rely on segmentation decreases, SCE&G will
4 be required to look at its system growth in more detail by area points rather than on
5 a system-wide basis in order to determine where new facilities will need to be
6 constructed and to contract for any necessary additional firm transportation by area
7 points.

8 As reported in Docket No. 2017-5-G, SCE&G contracted with DECGT for
9 50,000 DT per day of firm capacity—30,000 Dt per day of firm capacity in the
10 Columbia area point, 5,000 Dt per day of firm capacity in the Sumter area point,
11 and 15,000 Dt per day of firm capacity in the Charleston area point. DECGT
12 completed construction and the in-service date for this firm capacity was March 1,
13 2018.

14 Additionally, SCE&G acquired 5,000 Dt per day of firm capacity from
15 DECGT through an open season. This contract commences November 1, 2018.
16

17 **Q. HOW DOES SCE&G UTILIZE ITS COMBINED INTERSTATE STORAGE**
18 **AND ON-SYSTEM LNG TO ENSURE RELIABLE GAS SERVICE?**

19 A. There are two dimensions to storage services: peak capability and duration.
20 SCE&G uses its storage to address both of these dimensions. Certain storage
21 services are designed to meet spikes in demand on very cold days but only for a
22 short period of time. The storage services in SCE&G's portfolio of this type include

1 Transco LNG Storage Service and both the Bushy Park and Salley LNG facilities
2 located on SCE&G's system. Accordingly, these storage services provide SCE&G
3 with system reliability and peaking capability.

4 Other storage services are geared toward meeting demand over more of the
5 winter period and not only on the coldest days. As set forth in Exhibit No. ____
6 (RMJ-2), the storage services in SCE&G's portfolio of this type include Transco
7 Washington Storage Service ("WSS"), Transco Eminence Storage Service ("ESS"),
8 Transco General Storage Service ("GSS") and Southern's Contract Storage Service
9 ("CSS"). Therefore, these storage services provide SCE&G with duration
10 capability. Through the active management of these assets, SCE&G is able to meet
11 the needs of its firm customers on the coldest days of the winter and over the entire
12 winter.

13
14 **Q. PLEASE DESCRIBE THE CONSIDERATIONS EVALUATED BY SCE&G**
15 **IN ASSEMBLING ITS GAS SUPPLY PORTFOLIO.**

16 A. The Company's evaluations for assembling its gas supply portfolio include
17 reviewing the gas supply, storage, transportation, and other assets already under
18 contract. Other considerations include such things as geographical delivery
19 limitations, maximum volumes, storage ratchets, and the cost of the various
20 services. SCE&G then compares the resources against the firm demand under
21 varying weather conditions. Finally, the Company determines whether additional
22 resources are required to serve the firm demand.

1 **Q. PLEASE DESCRIBE THE USE OF EACH OF THESE VARIOUS**
2 **SERVICES WITHIN THE PORTFOLIO.**

3 A. SCE&G places different levels of reliance on its various supply sources
4 based on the time of year in question. Decisions related to the purchase of gas
5 supply are based upon the best information available to SCE&G at the time of
6 execution. During the winter heating season, the Company uses its wellhead gas as
7 its principal supply, followed by the use of its natural gas supply stored in
8 underground storage facilities. SCE&G primarily uses its on-system LNG to meet
9 the last increment of demand on the coldest days or hours of the year.

10 As the winter progresses, this order of usage may be modified. For example,
11 if South Carolina experiences mild weather during the early part of the winter and
12 storage inventories are relatively high, then underground storage and LNG
13 withdrawals may be used instead of wellhead supply.

14
15 **II. NATURAL GAS MARKET**

16 **Q. PLEASE DISCUSS THE STATE OF THE NATURAL GAS MARKET**
17 **DURING THE REVIEW PERIOD.**

18 A. Domestic natural gas supply continues to be the lowest priced and most
19 abundant supply in the global natural gas market primarily due to domestic shale
20 production. However, the cost of building new interstate pipeline infrastructure to
21 move shale production continues to rise due to the amount of greenfield pipeline
22 required to move supply from areas in the Northeast such as Marcellus and Utica to

1 market. Interstate pipeline flows are also changing direction. Historically, interstate
2 pipelines have moved gas from the Gulf of Mexico to the Northeast. Developed,
3 current and proposed pipeline projects are reversing the flow to move gas from
4 North to South. Further, the construction timeline to build interstate pipeline
5 capacity is increasing due to more scrutiny from regulators, special interest groups
6 and the public. New capacity projects are estimated to take four (4) years or more
7 before they can be placed into service.

8 Regarding natural gas prices, the market began the Review Period in the low
9 \$2.80's per Dt. From August until mid-December, prices traded in a range between
10 the \$2.70's and the \$3.20's. Low early winter demand resulted in a move lower,
11 reaching as low as \$2.57 in mid-December. However, this move lower was short
12 lived as cold temperatures arrived in late December, driving prices to the mid
13 \$3.60's by the end of January. The return of more moderate temperatures in
14 February caused the market to decline, establishing the low for the Review Period
15 of \$2.53 in mid-February. After establishing this low, the market slowly increased,
16 as national storage levels continue to lag behind prior years. This storage deficit
17 allowed the market to reach the low \$3.00's in early June. While demand for electric
18 generation remained strong during the summer, the lack of extended extreme heat
19 eased demand enough for the market to finish the Review Period near where it
20 began, in the high \$2.70's.

1 **Q. PLEASE DESCRIBE THE TOOLS THAT THE COMPANY UTILIZES TO**
2 **MITIGATE PRICE VOLATILITY TO ITS CUSTOMERS.**

3 **A. The Company relies on the approved 12-month rolling purchased gas**
4 **adjustment mechanism, as described in more detail by Company Witness Elliott, and**
5 **physical gas storage to mitigate price volatility to its customers.**
6

7 **III. COMPANY REQUESTS**

8 **Q. IN REGARD TO THE COMPANY'S PURCHASING PRACTICES, WHAT**
9 **ARE YOU REQUESTING OF THE COMMISSION IN THIS**
10 **PROCEEDING?**

11 **A. During the Review Period, SCE&G contracted for sufficient supplies of natural**
12 **gas and provided reliable service to its customers. SCE&G also adequately maintained**
13 **gas, storage, and transportation assets for its system during the Review Period at levels**
14 **that were prudent and reasonably met the reliability and service needs of the system.**
15 **It is my opinion that SCE&G's acquisition and management of these assets during the**
16 **Review Period has been prudent and reasonable. Therefore, I respectfully request the**
17 **Commission find that SCE&G's cost for gas purchases and asset management were**
18 **reasonable and prudent for the Review Period.**
19

20 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

21 **A. Yes.**

South Carolina Electric & Gas Company
Existing Firm Transportation Contracts

Exhibit No. ____ (RMJ-1)

		Maximum Firm Transportation Dt/Day	Expiration Date
Southern			
FSNG349 FT	Firm Transportation	44,078	August 31, 2021
FSNG349 FTNN	Firm Transportation	80,472	August 31, 2021
FSNG349 FT	Firm Transportation	36,594	August 31, 2021
		<u>161,144</u>	
Transco			
Z1 - Z5	Firm Transportation	3,209	December 30, 2021
Z2 - Z5	Firm Transportation	4,720	December 30, 2021
Z3 - Z5	Firm Transportation	3,587	December 30, 2021
Z3 - Z5	Firm Transportation	7,360	December 30, 2021
Station 65 (Sunbelt)	Firm Transportation	39,606	October 31, 2020
Station 85 (Sunbelt)	Firm Transportation	6,170	October 31, 2020
FT	Firm Transportation	5,806	March 31, 2084
		<u>70,458</u>	
Dominion Energy Carolina Gas			
Transmission (DECGT)	Firm Transportation	1,500	April 30, 2028
	Firm Transportation	7,500	October 31, 2026
	Firm Transportation	12,000	October 31, 2036
	Firm Transportation	50,000	February 29, 2048
	Firm Transportation ⁽¹⁾	5,000	March 31, 2035
	Firm Transportation	296,929	October 31, 2021
		<u>372,929</u>	

⁽¹⁾Transportation Contract commences November 1, 2018

Note: The Transco and Southern systems interconnect with the DECGT system at a number of metering stations. Supply transported using the firm capacity contracted for the Southern and Transco systems are, in most instances, delivered to SCE&G's 96 delivery points by DECGT. Thus, firm transportation capacity on the Transco and Southern systems cannot be aggregated with the firm transportation capacity on DECGT to reflect accurately the firm transportation capacity available to deliver gas to SCE&G's customers.

INTERSTATE STORAGE AND LNG STORAGE**I. Interstate Storage**

<u>Pipeline</u>	<u>Type</u>	<u>Maximum Storage Quantity</u>	<u>Maximum Daily Withdrawal Quantity</u>	<u>Contract Expiration Date</u>
Southern	CSS	4,908,848	99,121	August 31, 2021
Transco	ESS	115,846	13,854	September 30, 2029
Transco	GSS	26,366	503	March 31, 2023
Transco	WSS	447,938	4,715	March 31, 2020
Transco	LNG	3,585	717	October 31, 2019
Total Transco		593,735	19,789	
Total Interstate		5,502,583	118,910	

II. SCE&G On-System LNG (in mcf)

SCE&G	LNGS	1,880,000	105,000	
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Note: All values are stated in Dt, unless otherwise noted

Exhibit No. ____ (RMJ-3)

South Carolina Electric & Gas Company
Available System Wide Capacity to Serve Firm Sales Service Demand

	2018-19 Winter Reserve Capacity (Dt)
DECGT Firm Interstate Capacity	372,929
SCE&G Shared DECGT Interstate Capacity	27,000
Total Capacity to Deliver Gas to SCE&G via DECGT	399,929
 SCE&G's Peak Design Day Demand (Firm Sales Service to Customers)	 419,846
Less: Direct Connect Firm Sales Service Customers	35,694
Net SCE&G Firm Sales Service Customers behind DECGT	384,152
 Reserve dts	 <u>15,777</u>
 Reserve %	 <u>4.11%</u>